ceeded to his B.A. degree in the spring commencements of 1835, taking the LL.D. in the summer of 1868. In 1834 he was appointed Professor of Natural Philosophy to the Dublin (now the Royal Dublin) Society, and he at this period devoted himself with great ardour to original research in the field of chemistry, as the long list of his papers in the Royal Society's list will testify. He studied in Germany during his summer vacations under both Liebig and Mitscherlich, and passed some time under Dumas at Paris. In 1831 he was elected a member of the Royal Irish Academy; he was Secretary of its Council from 1842 to 1846, and was elected President in 1877. In 1849 he was made a Fellow of the Royal Society; shortly afterwards he was selected by the Government as head of the Museum of Irish Industry, which post he held until appointed the first President of the Queen's College, Cork. He was a Fellow of the King and Queen's College of Physicians, Ireland, a Commissioner of National Education, and a Justice of the Peace, Ireland.

After over twenty-two years of hard and earnest work in the development of the Cork College, he resigned the presidency in 1873, and took up his residence in Dublin, where he died on Sunday, the 16th instant.

Sir Robert Kane, in addition to the very numerous papers above referred to, was the author of a large and most important work on the industrial resources of Ireland, a theme which he handled in a painstaking and judicious manner. In his very early days he had acquired a practical knowledge of the value and importance of many of the neglected industries of Ireland, and from his chair in the lecture theatre of the Dublin Society, he often called attention to this subject, one which throughout his long life he never lost sight of. It is not without interest to note the fact that much is owing to the Royal Dublin Society for the ready help afforded to their two Professors, now both deceased, Sir Richard Griffith and Sir Robert Kane, in their efforts to advance the industries of Ireland.

In 1841, Sir R. Kane was awarded by the Royal Society a Royal Medal for his researches into the chemical history of archil and litmus; and in 1843, the Cunningham Gold Medal of the Royal Irish Academy, for his researches on the nature and constitution of the compounds of ammonia. These memoirs will be found published in the Transactions of the respective institutions.

In recognition of his scientific labours, and on his appointment to the presidency of Queen's College, Cork, he received knighthood in 1846 from Lord Heytesbury, the then Irish Viceroy. On the passing of Mr. Fawcett's Act in 1875, which altered the constitution of the University of Dublin, and appointed a Council, Sir Robert Kane was elected one of the first Roman Catholic members of that body, a post which he held until 1885, when the late Dr. Maguire was elected.

In this brief obituary notice, it is not necessary to attempt any analysis of the scientific work accomplished by Sir Robert Kane, but it is impossible to conclude it without a tribute of respect and affection to the many high and excellent qualities of the man, who in the various positions of Professor, head of a young educational establishment, or President of an Academy, won equally, from all with whom he came in contact, regard and esteem.

NOTES.

PROF. SCHUSTER has been elected Bakerian Lecturer for the present year. The lecture is to be delivered in the apartments of the Royal Society on March 20.

LAST week Mr. Justice Kay complained that judicial time is sadly wasted over patent cases, and he declared that the smaller and more petty the dispute the more time seemed to be expended. Now, as we have pointed out more than once, enormous waste of time is inevitable where the suitors in patent cases, especially in cases which involve scientific details, as most of them do at the present day, have to appear before a judge who is not himself a man of science. They have to begin by teaching his lordship the rudiments of that branch of science of which the disputed patent is a practical application. That our judges are painstaking, rapid, and acute pupils may readily be granted, but still time has to be consumed in the task, and there is something pathetic in the spectacle of an able and conscientious lawyer wrestling with the problems presented by the highest applications of, say, electricity or chemistry to industry, while scientific witnesses are contradicting each other all round him. We fear that judicial time will continue to be wasted so long as judges without a knowledge of science are left unaided to decide questions which demand long scientific training. There can be no change for the better until judges have sitting on the bench with them scientific assessors as they have now nava assessors, or until scientific cases are passed on as a matter of course to qualified referees as cases involving accounts are. It requires at least as much special training, and is as far outside the experience of ordinary lawyers, to settle a scientific case, as to decide whether a ship has been properly navigated, or whether a set of accounts tell in favour of a plaintiff or a defendant.

ON Tuesday evening there was some discussion in the House of Commons as to the supplemental vote of £100,000 for the purchase of a site at South Kensington for a suitable building for the housing of the science collections. Mr. Jackson explained that the extent of the land was four and a half acres, and the sum at which it was valued included a building for which the Government now paid a rent of £1500 a year, which would, of course, fall out of the Estimates when the Government became the proprietors of the land in question. No commission was to be paid to any person on either side in respect of this transaction, which was a direct one between the Commissioners of the 1851 Exhibition and the Government. Sir H. Roscoe thought it desirable that the money should be voted at once. The plot of land was the only one ever likely to be available for the purpose. Mr. Mundella said that as he had been pressing upon Governments for the last ten years the necessity for them to acquire this land, he thought that he ought to say something in defence of what the Government had done in asking for the sum on the present occasion. He did not approve of supplementary estimates, and he thought that no one would be more glad to get rid of them than the Government themselves. This question, however, had been pressing for the last ten years, because for the whole of that period the most valuable national science collections, such as no other country in the world possessed, had been housed in the most disgraceful manner. The Treasury had all along resisted the demands made upon them to sanction the expenditure necessary for the erection of a Museum to hold these collections, notwithstanding that three departmental committees had reported in favour of that expenditure. The only question, therefore, was whether the Government were getting good value for their money in making this purchase. He knew something of the value of the land, which had been fixed by eminent surveyors at £200,000, while the Government were going to get it for £70,000. The money which the Commissioners would receive in respect of the sale would be appropriated to providing scholarships for the promotion of technical education to the amount of £5000 per annum, which were to be open to all schools of every denomination in the United Kingdom. He therefore urged the Committee to agree to this proposal at once. Sir L. Playfair explained that the Commissioners of the Exhibition of 1851 had formed their estimate of the value of the land upon the value of the surrounding property. The Commissioners had been pressed year after year to apply their surplus revenues to educational purposes. They had pressed the Government to come to some conclusion on the subject, as it had been going on for from three to ten years. They could not go on waiting continually, and the Government at last came to the conclusion—and, he thought, came to a wise conclusion—to accept the offer. He thought the Committee would see that they had been very patient. Mr. W. H. Smith, replying to the objection that the vote ought to have been included in the ordinary estimates, pointed out that if the vote were not taken at once, probably it could not be reached before June or July, or even August. It was unreasonable to ask the Commissioners to wait until that time. He had resisted the expenditure at South Kensington as long as he could, and until he was satisfied that in the interests of the country it was necessary. He strongly resisted the expenditure before, but when the Committee they had appointed reported that further accommodation was required, they had no alternative but to carry out their recommendations. The proposal of the Government was accepted by a majority of 77—the number of those in favour of the reduction of the vote being 67, while 144 voted on the other side.

WE regret to notice the death, on February 2, of M. Ch. Fievez, the assistant in charge of the spectroscopic department of the Royal Observatory of Brussels, at the comparatively early age of 45. M. Fievez did not enter the Observatory until 1877, having been originally intended for the military profession. M. Houzeau, then the Director of the Observatory, being desirous of creating a spectroscopic department, sent Fievez, to whom he proposed to commit its management, to study under Janssen at Meudon, with whom he remained six months. Fievez's most important work was the construction of a chart of the solar spectrum on a scale considerably greater than that of Ångström; but besides this he was not able to effect much in astronomical spectroscopy, owing to the unfavourable position of the Observatory for such observations. He therefore turned his attention principally to laboratory work, and in this department made a detailed study of the spectrum of carbon, besides numerous experiments on the behaviour of spectral lines under the influences of magnetism and of changes of temperature. M. Fievez was Correspondant of the Royal Academy of Belgium, and Foreign Member of the Society of Italian Spectroscopists.

STUDENTS of palæontology heard with much regret of the recent death of Prof. von Quenstedt, of Tübingen. He was the most famous of German palæontologists, and did much important work in mineralogy also. He had an especially profound knowledge of the Lias of Würtemberg and its fossils. His work on "Der Jura" is well known, and so recently as 1885 a new edition, greatly modified, of his "Handbuch der Petrefactenkunde" was issued. Dr. von Quenstedt died at an advanced age on December 21, 1889.

A WRITER who is contributing to *Industries* a series of articles on the "Recent Growth of Technical Societies," infers, from a comparison of the balance-sheet for 1878 with that for 1888, that the Proceedings of the Royal Society are "evidently less sought after than they were." An average of four years would have pointed to an opposite conclusion. For the years 1876–79 the average sale was £743 1*s.* 7*d.*, while that of 1886–89 was £810 3*s.* 3*d.* The writer leaves out of account, moreover, that in 1878 the Royal Society, according to their published list, presented their Transactions and Proceedings to 276 institutions, while at present they give them to no fewer than 363 institutions.

MUCH interest has been excited by the announcement of the discovery of coal in Kent. The search for coal at a point near the South-Eastern Railway, adjoining the experimental heading for the Channel Tunnel, has been carried on for several years. The following report, by Mr. Francis Brady, C.E., the engineer-in-chief of the South-Eastern and Channel Tunnel Companies, was published in the daily papers on February 20:—"Coal was reached on Saturday last, the 15th inst., at 1180 feet below the surface. It came up mixed with clay, and reduced almost to powder by the boring tools. A small quantity of clean bright coal found in the clay was tested by burning, and proved to be of good bituminous character. The seam was struck after passing through 20 feet of clays, grits, and blackish shales belonging to the coal-measures, which at this point lie close under the Lias, there being only a few intervening beds of sand, limestone, and black clay separating them. The correspondence of the deposits with those found in the Somersetshire coal-field is thus pretty close, the difference consisting in the absence of the red marl at the Shakespeare boring. The lines of bedding in the shale are distinctly horizontal. This is an indication that the coal-measures will probably be found at a reasonable depth along the South-Eastern Railway to the westward. I beg to hand you herewith two specimens of the clay containing coal, one taken at 1180 feet, and the other at 1182 feet. I also inclose a specimen of clean coal taken to-day at 1183 feet 6 inches from the surface." With regard to this report, Prof. Boyd Dawkins writes to us:—"As the enterprise resulting in the discovery of coal near Dover was begun in 1886, and is now being carried on under my advice, I write, after an examination of the specimens from the boring, to confirm the published report of Mr. Brady, so far as relates to the coal. The coal-measures with good blazing coal have been struck at a depth of 1160 feet, well within the practical mining limit, and the question is definitely answered which has vexed geologists for more than thirty years. Further explorations, however, now under consideration, will be necessary before the thickness of the coal and the number of the seams can be ascertained. This discovery, I may add, with all the important consequences which it may involve, is mainly due to the indomitable energy of Sir Edward W. Watkin."

THE second meeting of the Australasian Association for the Advancement of Science seems to have been in every way most successful. It was held at Melbourne, and began on January 7. At the Sydney meeting last year there were 850 members. This year the number rose to 1060. Baron von Müller, F.R.S., was the President. Great efforts were made to secure that members from a distance should enjoy their visit to Melbourne, and the serious work of the various Sections was varied by pleasant excursions. An excellent "Hand-book of Melbourne," edited by Prof. Baldwin Spencer, was issued.

THIS year the University of Helsingfors will celebrate its two hundred and fiftieth anniversary. It was founded at Abo, but transferred to Helsingfors in 1820.

AT a recent meeting of the French Meteorological Society, M. Wada, of the Tokio Observatory, gave a *résumé* of the seismological observations made in Japan during 1887. The number of earthquake shocks amounted during the year to 483. The hourly and monthly distribution of the shocks at Tokio during the last 12 years shows a slight excess in favour of the night-time, above the day; and also an excess in winter and spring, over the other seasons. The area affected during the year 1887 represented five times the superficies of the empire. M. Wada gave details of the shocks, their direction, intensity, and distribution.

TIDINGS of another great volcanic eruption have come from Japan. Mount Zoo, near the town of Fukuyama, in the Bingo district, began to rumble at 8 o'clock on the evening of January 16, and the top of the mountain is said to have been soon "lifted off." There was a din like a dynamite explosion, and sand and stones were belched forth. Stones and earth also fell at Midsunomimura, a village six miles away. No previous eruption of Mount Zoo is recorded. Only one man lost his life, but some cattle were killed, and 55 houses were destroyed. The total loss entailed by the eruption is estimated at nearly $3,500,000.

Two rather strong shocks of earthquake were felt at Rome on Sunday last, February 23, shortly after 11 p.m. They were more distinct in the environs than in the city itself, and especially at the Rocca di Papa in the Campagna. The Rome correspondent of the *Daily News* says it was remarked that flocks of sheep "showed great signs of fear some time before the shocks were felt." The correspondent of the *Standard* notes that in several public buildings the gas was almost extinguished, that electrical apparatus was disturbed, and that electric bells were set ringing. "My own experience," he adds, "was that of feeling lifted up from my seat, and then set down again with a slight, but sickening, jar, while doors rattled, and furniture was moved so as to produce noise in knocking against walls."

According to a telegram sent through Reuter's agency from Lisbon, a slight shock of earthquake was felt on February 24 at Leiria and places between it and the sea coast.

The Pilot Chart of the North Atlantic Ocean for February states that the month of January was remarkable for the tempestuous weather that prevailed almost uninterruptedly over the steamship routes. Storms succeeded each other in rapid succession, the majority of them having developed inland and moved east-north-east on very similar paths from Nova Scotia and across southern Newfoundland. The most notable storm of the month was probably one that developed in the St. Lawrence valley, and crossed the Straits of Belle Isle early on the 3rd. It then moved nearly due east, rapidly increasing in intensity until reaching the 20th meridian, when it curved to the north-eastward, and was central on the 5th about lat. 55° N., long. 17° W., and disappeared north of Scotland. The barometric pressure in this storm was remarkably low, 27·93 inches having been recorded at 4 p.m. on January 4, about lat. 53° N., long. 23° W. There was a slight increase in the amount of fog experienced; it was confined for the most part to the regions west of the Grand Banks. Much ice has been reported since the 5th; the positions and dates plotted on the chart indicate that the ice season is one of the earliest on record—nearly a month earlier than usual. This is due in a great measure to the prevalence of severe northerly gales east of Labrador, coincident with the heavy westerly gales of December and January along the Transatlantic route.

The Japanese Government, we observe, is about to establish a meteorological observatory in the Loochoo Islands. This is one of the most important positions in the East for meteorological purposes, for it fills up the very large gap at present existing between Shanghai and Manilla in one direction, and Hong Kong and Tokio in the other. Besides, the Loochoo Archipelago is a specially valuable position for observing the phenomena connected with the course of the typhoons of the China seas.

The meeting of the International Congress of Hygiene and Demography, which is to be held in London in 1891, will probably be thoroughly successful. An organizing committee, with Sir Douglas Galton as President, has been formed, and already delegates have been appointed by the leading scientific societies. On Tuesday, February 18, a deputation waited upon the Lord Mayor to discuss the arrangements that ought to be made for the meeting. The Lord Mayor, having heard what Sir Douglas Galton, Prof. Corfield, and other members of the deputation had to say as to the importance of the Congress, undertook that the matter should be brought forward at a public meeting in the Mansion House. This meeting will take place on Thursday, April 24, and the Lord Mayor will preside.

The ninth annual meeting of the members of the Sanitary Assurance Association was held on Monday, February 17, Sir Joseph Fayrer, F.R.S., in the chair. Mr. Joseph Hadley, Secretary, read the annual report, which concluded as follows:—"Though the important bearing of the work of the Association on the public health is not yet fully appreciated by the general public, the financial statement for the past year proves that the Association is making progress, and that after nine years' experience its work continues to be appreciated. The income for the year was £398 8*s.* 10*d.*, and after meeting all liabilities a balance is carried forward." The Chairman, in proposing the adoption of the report, said that the more he saw of the work of the Association, and the need for sanitary improvement, the more was he interested in its progress, and he expressed a hope that not only might this Association prosper, but that others might be formed, so great was the work to be done. General Burne and Dr. Danford Thomas were re-elected members of the executive council, and Sir Joseph Fayrer and Prof. T. Roger Smith were re-elected President and Vice-President respectively.

Some time ago we referred to the fact that the Manchester Field Naturalists' and Archæologists' Society had appointed a committee for the purpose of promoting the planting of trees and shrubs in Manchester and its immediate suburbs. The idea has commended itself to the Corporation, and it is expected that evergreen shrubs, planted in boxes or tubs, will soon be placed in some of the principal squares. Meanwhile, the committee are trying to obtain the aid of experienced practical men. They have issued a circular with the following list of questions:—"What description of trees would you especially recommend for open spaces?" "What kind of shrubs, especially such as would succeed in tubs or boxes?" "What suggestions can you offer as to soil, treatment, and upon any important point relating to tree culture in towns?" When the best information that can be obtained has been brought together, it will be embodied in a pamphlet, which may, it is hoped, serve as a general guide for tree planting and culture.

At the meeting of the Royal Botanic Society on Saturday, the Secretary called attention to several plants of hygrometric club moss from Mexico, which had been presented, with other specimens, by Mr. A. Gudgeon. The Secretary stated that these plants had the power, ascribed to the well-known rose of Jericho, of rolling themselves up like a ball when dry, and becoming apparently dead; but that they were able to unfold and grow again when exposed to moisture. The specimens shown had been kept for three months in a dry place, but now were green, and to all appearance flourishing.

The following lectures will be given at the Royal Victoria Hall during March:—March 4, Mr. F. W. Rudler, on "Geology in the Streets of London"; 11th, Dr. Dallinger, on "The Infinitely Great and the Infinitely Small"; 18th, Prof. Beare, on "Australia"; 25th, Mr. W. North, on "Rome."

"Our Earth and its Story" (Cassell and Co.) consists of three volumes, not two, as inadvertently stated in our notice of the work on February 13 (p. 341).

A series of new compounds of hydroxylamine, NH_2OH, with several metallic chlorides, are described by M. Crismer in the current number of the *Bulletin de la Société Chimique.* The first member of the series obtained was the zinc compound $ZnCl_2.2NH_2OH$, whose existence was unexpectedly discovered during the course of experiments upon the action of metallic zinc on aqueous hydroxylamine hydrochloride. A ten per cent. solution of this latter salt was treated with an excess of pure zinc; no evolution of gas was noticed in the cold, but on warming over a water-bath a slow disengagement of bubbles was found to occur. After allowing the reaction to complete itself during the course of a few days, the liquid, which had become turbid, was filtered, allowed to cool, and again filtered from a little more flocculent material which separated out, and finally concentrated and allowed to crystallize. A large quantity of hemispherical crystal aggregates then separated, which were found on analysis to consist of the new salt, $ZnCl_2.2NH_2OH$. Several other methods of obtaining it were investigated; it may be obtained by treating an aqueous solution of hydroxylamine hydrochloride, $NH_2OH.HCl$, with zinc oxide or carbonate, or with a mixture of zinc sulphate and barium carbonate, or by treating an alcoholic solution of hydroxylamine with zinc chloride. But the best method, and one which gives 97 per cent. yield, consists in dissolving ten parts of hydroxylamine hydrochloride in 300 c.c. of alcohol in a flask provided with an inverted condenser; the liquid is then heated to the boiling-point and five parts of zinc oxide added, the boiling being continued for several minutes afterwards. The clear liquid is then decanted and allowed to cool. After the deposition of the first crop of crystals, the mother liquor may be returned to the flask and treated with a further quantity of zinc oxide, four repetitions of this treatment being sufficient to obtain an almost theoretical yield of the salt. The white crystals are then washed with alcohol and dried in the air. They resist the action of most solvents, water only slightly dissolving them, and that with decomposition. Organic solvents are practically without action upon them. When heated in a narrow tube, as in attempting to determine the melting-point, the salt violently explodes. If a quantity is heated to about 120° C., in a flask connected with a couple of U-tubes, the second containing a little water, gas is abundantly liberated, and drops of hydroxylamine condense in the first U-tube together with a little nitrous acid. The water in the second tube is found to contain hydroxylamine, ammonia, and nitrous acid, while fused zinc chloride remains behind in the flask. A similar cadmium salt was also obtained, $CdCl_2.2NH_2OH$, in brilliant crystals which separated much more quickly than those of the zinc salt. This cadmium compound is much more stable under the action of heat, gas being only liberated in the neighbourhood of 190°-200°, and only a little hydroxylamine distils over. The barium salt, $BaCl_2.2NH_2OH$, is a specially beautiful substance, crystallizing from water in large tabular prisms, which are very much more soluble in water than either of the salts above described.

THE additions to the Zoological Society's Gardens during the past week include an Esquimaux Dog (*Canis familiaris* ♀), bred in England, presented by Mr. W. Tournay; two Barbary Turtle-Doves (*Turtur risorius*) from North Africa, presented by Miss Teil; a Bonnet Monkey (*Macacus sinicus* ♀), a Macaque Monkey (*Macacus cynomolgus* ♂) from India, a Common Raccoon (*Procyon lotor*) from North America, deposited; a Green Monkey (*Cercopithecus callitrichus*) born in the Gardens.

OUR ASTRONOMICAL COLUMN.

OBJECTS FOR THE SPECTROSCOPE.

Sidereal Time at Greenwich at 10 p.m. on February 27 = 8h. 30m. 43s.

Name.	Mag.	Colour.	R A. 1890.	Decl. 1890.
			h. m. s.	° ′
(1) G.C. 1711	—	—	8 45 37	+51 44
(2) 58 Hydræ, U.A. ...	7	Yellowish-red.	8 39 53	−10 45
(3) ζ Hydræ	3	Yellowish-white.	8 49 36	+ 6 22
(4) ϵ Hydræ	3	Yellowish-white.	8 41 0	+ 6 49
(5) 115 Schj.	6	Yellowish-red.	8 49 11	+17 39
(6) W Tauri	Var.	Reddish-yellow.	4 21 45	+15 51

Remarks.

(1) "Very bright; very large; at first very gradually, then very suddenly much brighter in the middle." The spectrum of this nebula has not yet, so far as I know, been recorded.

(2) Dunér classes this with stars of Group II., but states that the spectrum is very feebly developed, and expresses a doubt as to the type. As I have before remarked, Mr. Lockyer's discussion of the stars of this group seems to indicate that the spectra which are described as "feebly developed" really represent stages in the passage from one group to another. If, for example, we consider a rather faint star with the banded spectrum a little more developed than in the case of Aldebaran, its spectrum would no doubt be described as "feebly developed," if classed with Group II. In such a case the star would be more condensed than those in which the spectrum is said to be well developed, and the flutings would have almost entirely given way to lines. Line absorptions would therefore indicate that the star belonged to a late stage of the group. On the other hand, if the star be at a very early stage of condensation, the flutings would still only be feebly developed, and might be accompanied by bright lines. In any case, further examination is necessary, as the star may belong to an early stage of Group VI., and not to Group II. at all.

(3) A star classed by Vogel with stars of the solar type. The usual differential observations are required.

(4) A star of Group IV. (Vogel). The usual observations are required.

(5) A "superb" example of stars of Group VI. (Dunér). The principal bands are very wide and dark, and the secondary bands 4 and 5 are also well seen. Bands 7 and 8 are doubtful.

(6) This variable will reach a maximum about March 7. The period is about 360 days, and the magnitudes at maximum and minimum are 8·2 ± and < 13 respectively. The star is not included in Dunér's catalogue, but Vogel states that the spectrum is of the Group II. type. Observations before and after maximum, with special references to changes of spectrum, should be made.

NOTE ON THE ZODIACAL LIGHT.—In favourable localities the zodiacal light should now be visible in the evening, and as further spectroscopic observations are desirable, it may be convenient to briefly summarize here the results already obtained. Ångström first observed the spectrum at Upsala, in March 1887, and noted the presence of the chief line of the aurora spectrum, at a wave-length stated as 5567. Respighi, in 1872, also observed this line, in addition to a faint continuous spectrum, and believed this to demonstrate the identity of the aurora and zodiacal light. He found, however, that at the same time the bright line was visible in almost every part of the sky, and this led to the suggestion that it originated from a concealed aurora. Prof. Piazzi Smyth, in Italy, observed nothing but a faint continuous spectrum, extending from about midway between D and E to F. A. W. Wright's observations led him to the following conclusions:—"(1) The spectrum of the zodiacal light is continuous, and is sensibly the same as that of faint sunlight or twilight. (2) No bright line or band can be recognized as belonging to this spectrum. (3) There is no evidence of any connection bebetween the zodiacal light and the Polar aurora" (Capron's "Auroræ," p. 69). Mr. Lockyer believes the zodiacal light to be due to meteoritic dust, which is to a certain extent self-luminous, as indicated by the bright line in the spectrum, and argues in favour of a connection between auroræ and the zodiacal light (Proc. Roy. Soc., vol. 45, p. 247). He says:—"The observations of Wright and others, showing that the spectrum is continuous, are not at variance with Ångström's observation, for we should expect the spectrum to be somewhat variable. It is probable that the observations showing nothing but continuous spectrum were made when the temperature was only sufficient to render the meteoritic particles red hot. That the zodiacal light does consist of solid particles, or, at all events, of particles capable of reflecting light, is shown by the polariscope." He also quotes from a letter in which Mr. Sherman, of Yale College, states that he has reason to believe that the appearance of the bright line in the zodiacal light has a regular period.

On January 20 I saw the zodiacal light very well at Westgate-on-Sea, but was unable to detect anything beyond a faint continuous spectrum.

Mr. Maxwell Hall's observations at Jamaica (see NATURE, February 13, p. 351) also record continuous spectra, but with remarkable changes in the region of maximum intensity. He suggests comparative observations with the spectrum of twilight,